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PATENT APPLICATION
Serial No. 10/541,636**REMARKS**

Claims 1-7, 9-18, 20 and 22 are pending in the captioned Application in which claims 1-7, 10-18 and 20 are rejected, and claims 9 and 22 are allowed. Claims 8, 19 and 21 were previously canceled.

This Response provides the reasons for allowing Applicants' pending claims and so places the Application in condition for allowance. Thus entry of this Response is believed to be proper under the Rules, and such action is solicited.

This response does not narrow the scope of any claim element or limitation and so is not limiting of any claim element or limitation, and Applicant reserves the right to the benefit of the doctrine of equivalents with respect thereto.

Rejection Under 35 U.S.C. §103(a):

Claims 1-7, 10-18 and 20 are rejected under 35 U.S.C. §103(a) as being unpatentable over PCT Publication WO 98/15788 to Tychsen in view of US 3,707,987 to Gordon.

The rejection is respectfully traversed.

Tychsen relates to a method for operating a refrigeration system and a control valve 17 wherein a valve cone 22 is guided to be movable for controlling passage of fluid from an inlet 18 to an outlet 19. A valve piston 23 may force the valve cone 22 toward sealing with the valve seat 20. (Abstract; Page 7, line 27 to page 8, line 23). A valve lifting means includes a valve cone lifting spring 36 that applies force to the valve cone 22 tending to lift the valve cone 22 off of the seat 20, i.e. the valve cone 22 is biased to be lifted on the biasing force of the lifting spring 36. (Page 9, line 35 to page 10, line 15; also page 5, lines 3-33; page 18, lines 31-35).

It is thus clear that Tychsen only describes a spring 36 that biases valve cone 22 away from valve seat 20, and nothing in Tychsen suggests otherwise. It is submitted that this biasing arrangement is an important aspect of the operation of the valve and system of Tychsen, i.e. to "serve the purpose of biasing the valve cone to rest against the front face of

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the piston rod and thus to follow the movements of the piston rod" (page 5, lines 4-6), and nothing in Tychsen would allow for any change thereto.

Applicant recites biasing the valve member with respect to the piston to close the inlet, which is the opposite of what Tychsen requires, and, as shown below, Gordon does not supply what Tychsen lacks. Thus, the rejection fails because it is based upon an incorrect view of Tychsen and should be withdrawn on that basis alone.

The Examiner's statement that "Tychsen discloses a valve assembly having a housing with an inlet (18) and an outlet (19), a piston (23), a valve member (22) that is movable with respect to the piston (see figures 2, 6 and 7) and a biasing means (36)" is a misstatement because it is incomplete in that it fails to continue to state what the biasing means does – it biases the valve member away from the valve seat.

Tychsen also lacks a manual shut off as the Examiner admits.

Gordon relates to an adjustable valve assembly providing a manual check valve function that can be shut off, e.g., by shut off means 56 to maintain valve member 42 in the closed position, wherein elongated shut off member 58 may be displaced to press against surface 47 for maintaining the valve member 42 in its closed position. (Column 3, lines 27-55).

Gordon does not describe a piston in its valve. Nothing in Gordon describes or suggests how a piston might be included therein or that there could be any reason or motivation for providing a piston therein. Moreover, the valve member 42 of Gordon directly connects to shut off means 56, i.e. through elongated shut off member 58, shank portion 68 and stem portion 46, and so there is no need for any biasing means.

Moreover, Tychsen shows in Figures 3 and 4 various systems that include shut off valves 41, 42 that are separate from discharge check valve 17. (Page 12, lines 1-7 and 18-26; page 14, lines 3-7). Thus, Tychsen does not provide any suggestion or motivation for its valve 17 including a shut off, or for the combination of Tychsen with Gordon, and it is submitted that Tychsen teaches otherwise.

Moreover, in attempting to combine Gordon into Tychsen, the Examiner splits Gordon so that the manual shut off piece of the Gordon valve would have to be grafted into

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one location in the Tychsen valve and the biasing spring piece of Gordon would have to be grafted into another location in the Tychsen valve. Apart from such substitutions interfering with the described operation of the Tychsen valve, it is submitted that such involved re-engineering of the Tychsen valve requires more than ordinary skill in the art.

It is noted that even if the Examiner were to apply another reference like Gordon for providing a spring that biases the valve cone towards the valve seat, i.e., towards a closed position, such reference could not properly be combined with Tychsen because it would also render Tychsen's valve inoperative as described by Tychsen.

The combination of Tychsen and Gordon is improper under the law for several reasons. First, Tychsen teaches a lifting spring 36 providing bias to lift valve cone 22 away from valve seat 20, i.e. tending towards opening the valve, whereas Gordon teaches oppositely that a spring 50 biases valve 42 towards the closed position. This teaching away is further evident in that if the spring 50 arrangement from Gordon could be and were to replace the lifting spring 36 of Tychsen, then the Tychsen valve would not operate as Tychsen describes and, it is submitted, as Tychsen requires.

"When the prior art teaches away from combining certain known elements, discovery of a successful means of combining them is more likely to be non-obvious." *KSR Int'l Co. v. Teleflex Inc.*, __ U.S. __ (2007), 2007 U.S. Lexis 4745, 34, citing *United States v. Adams*, 383 U.S. 39, 51-52 (1966).

It is "error to find obviousness where [the] references 'diverge from and teach away from the invention at hand'." *In re Fine*, 5 U.S.P.Q.2d 1596, 1599 (Fed. Cir. 1988) citing *W. L. Gore & Assoc. v. Garlock, Inc.*, 721 F.2d 1540, 1550, 220 U.S.P.Q. 303, 311 (Fed. Cir. 1983).

In addition, the combination is improper because neither reference suggests its combination with the other, nor does anything else cited in the rejection. The Examiner's assertion is not supported because the Examiner must split the Gordon valve into two pieces and substitute those two pieces into two different locations within Tychsen's valve. What is

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the motivation or suggestion to combine a manual check valve (Gordon) with a pressure regulating valve (Tychsen)? And where is such motivation or suggestion found?

Absent some statement or suggestion within the references themselves or otherwise that they should be combined, there is no nexus which could substantiate the suggested combination.

"Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination. Under section 103, teachings of references can be combined *only* if there is some suggestion or incentive to do so."

ACS Hospital Systems, Inc. vs. Montefiore Hospital, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984).

The burden is on the Examiner to particularly identify the suggestion, teaching, or motivation for their combination, and not just naming similarities between the reference(s) and the claimed invention. *Ruiz v. A.B. Chance Co.*, 234 F.3d 654 (Fed. Cir. 2000), 57 U.S.P.Q.2d 1161, 1166; *In re Dembiczak*, 175 F.3d 994 (Fed. Cir. 1999), 50 U.S.P.Q.2d 1614, 1618.

"[A] rejection cannot be predicated on the mere identification ... of individual components of claimed limitations. Rather, particular findings must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed."

Ecolochem Inc. v. Southern California Edison, 56 U.S.P.Q.2d 1065, 1076 (Fed. Cir. 2000) quoting *In re Rouffet*, 149 Fed.3d 1350, 1357 (Fed. Cir. 1998), 47 U.S.P.Q.2d 1453, 1456.

The Examiner statement that "it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the valve assembly of Tychsen with the manual shut-off arrangement and a biased normally closed valve member as taught by Gordon in order to provide an element to lock a check valve into a permanently closed position" is completely unsupported as there is no suggestion or motivation to provide an element to lock the regulating valve of Tychsen into a permanently closed position. This assertion is impermissible hindsight based upon the teaching of Applicant's invention.

"When prior art references require selective combination...to

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render obvious a subsequent invention, there must be some reason for the combination other than the hindsight gleaned from the invention itself..."

Uniroyal Inc. vs. Rudkin-Wiley Corp., 5 U.S.P.Q.2d 1434, 1438 (Fed. Cir. 1988). It is impermissible to use the claims as a frame and the prior art references as a mosaic to piece together a facsimile of the claimed invention, and the Examiner must avoid the "insidious effect of a hindsight syndrome wherein only that which the inventor taught is used against the teacher". *W. L. Gore & Assoc. v. Garlock*, 721 F.2d 1540, 1552, 1553, 220 U.S.P.Q. 303, 312, 313 (Fed. Cir. 1988).

Moreover, even if such combination could properly be made, the resulting structure would not be that of the claimed invention, but would just be either the valve of Tychsen which requires a spring 36 that biases the valve cone 22 away from the valve seat 20, or a valve that looks similar to the Tychsen valve, but that does not operate as Tychsen describes.

On the other hand, the valve of Applicants' claim 1 is patentable at least because it recites:

"a housing having an inlet and an outlet, and a pressure sensing port, a piston slidable in a part of the housing in response to a difference between a first fluid pressure at the pressure sensing port on the one side of the piston, and a second fluid pressure at the inlet and/or outlet on the other side of the piston, a valve member carried by the piston and operable thereby to close the inlet when said second fluid pressure is less than a value sufficiently greater than said first fluid pressure; wherein the valve member is movable with respect to the piston to facilitate closing of the inlet, in response to a fluid flow from the housing to the inlet, biasing means being arranged to bias the valve member with respect to the piston to close the inlet, when the piston is not acting to close the inlet, and wherein manual shut-off means comprising a spindle having a non-round proximal portion and a threaded distal portion are provided for closing the valve,"

which is not described or suggested by Tychsen and/or Gordon, whether taken individually or properly combined.

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Further, the valve of Applicants' claim 14 is patentable at least because it recites:

"a housing having an inlet and an outlet, and a pressure sensing port,

"a piston slidable in a part of the housing in response to a difference between a first fluid pressure at the pressure sensing port on the one side of the piston, and a second fluid pressure at the inlet or at the outlet or at both the inlet and the outlet on the other side of the piston,

"a valve member carried by the piston and operable thereby to close the inlet when the second fluid pressure is less than a value sufficiently greater than the first fluid pressure; wherein the valve member is movable with respect to the piston to facilitate closing of the inlet in response to a fluid flow from the housing to the inlet,

"a spring biasing the valve member with respect to the piston to close the inlet when the piston is not acting to close the inlet, and

"a manual shut-off engaging the piston for moving the valve member against the inlet for manually closing the valve,"

which is not described or suggested by Tychsen and/or Gordon, whether taken individually or properly combined.

Applicant's claims 2-7, 10-13, 15-18 and 20 are patentable at least because they depend from one of patentable claims 1 and 14.

Accordingly, the rejection under 35 U.S.C. §103(a) is overcome and should be withdrawn.

Conclusion:

Applicant respectfully requests that this Response be entered, that the rejection be withdrawn, and that the Application including claims 1-7, 9-18, 20 and 22 be allowed and passed to issuance.

The number of claims remaining being the same as or less than the number previously paid for, no fee is due therefor in consequence of this timely filed response.

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However, should the fee calculation be incorrect, or should any other or additional fee be due in consequence of this response, please charge such fee and deposit any refund to Deposit Account 04-1406 of Dann, Dorfman, Herrell & Skillman.

The Examiner is again thanked for granting a Telephone Interview, and is requested to telephone the undersigned attorney if there is any question or if prosecution of this Application could be furthered by telephone.

Respectfully submitted,
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